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ORIGINAL ARTICLES.

Lavage of the Stomach.

BY IDA C. BARNES, M.D.

Read before the Kansas Medical Society, May 4, 1894.

The advocacy of any special plan of treatment for disease, which shall in itself be effective, or which shall prepare the way for the greater efficacy of drugs, demands a thorough exposition of the manner in which this is done, with the results obtained.

It is only in the later years that the medical profession have realized that the secretion of the mucous follicles of a congested and inflamed mucous membrane form an almost impenetrable coat upon such membranes, not only preventing the absorption of medicines given or applied, but also, in the case of the digestive system, preventing the ferments from reaching the food to be digested, and hence arise all the symptoms, so common to the general practitioner, of indigestion or dyspepsia.

It is true that in a certain portion of these cases there is a deficiency of HCl, or of pepsin or other ferments in some degree, dependent upon atrophy of glands or some constitutional dyscrasia not to be reached by a simple removal of mucus; but even in these cases much relief is obtained by the removal of any offending material that may keep up irritation *per se* or through the gases generated from its decomposition.

Lavage is particularly indicated where there is an excess of mucus, although beneficial in a great variety of other cases of gastric disturbance.

Osler, in his recent "Practice of Medicine," advocates it even where the irritation is due entirely to a neurosis.

The *modus operandi* consists in preparing the patient for the ordeal, and it is rather a disagreeable one at first, by prescribing a light diet, preferably liquid—large particles of food will not pass through the tube.

The clothing must be protected by oilcloth, or an ordinary sheet folded several times; the carpet should also be covered with some removable material.

I prefer the soft rubber tube, and have had no difficulty of introduction with the exception of one case of sick headache, accompanied by great nausea, with inability to vomit.

The patient was also very neurotic, and I unwisely attempted to introduce the tube without assistance while she resisted most strenuously, her face becoming quite cyanotic.

I succeeded in getting the tube down, but she would not retain it until I could use the water, and she never allowed me to try it again.

A physician ought not to attempt to wash out the stomach the first time without either one or two assistants.

Some patients are so sensitive to the sense of strangulation produced that they must be held in order that they shall not interfere with the process of introduction, but after the first time, if the stomach has been thoroughly washed out, they will usually swallow the tube without much difficulty.

If success does not follow the first attempt, a second trial in private practice is not very soon attainable, for the patient is convinced that the tube is too large for his œsophagus, and then he cannot swallow it.

It is reported by one of the students of the University of Pennsylvania that Dr.

Pepper, in a clinic at Blockley Hospital, attempted to introduce the tube into the stomach of a young man, and signally failed.

There may have been a stricture of the œsophagus, or an abnormally small lumen of this passage, or a nervous condition which induced a spasmodic contraction.

Dr. Liebman, in an article in the March number of the *Boston Medical and Surgical Journal* of 1891, says that he uses a smooth stylet of rattan of the thickness of a number six or eight English catheter, about thirty-four inches in length, which projects an inch or two beyond the proximal extremity of the soft rubber stomach-tube, to facilitate the introduction, and that the distal extremity is curved like the peak of a metallic bougie.

In using the tube the stylet is withdrawn when the entrance of the œsophagus is reched.

Dr. W. Soltan Fenwick, in the April number of the *London Practitioner* of 1892, discusses some of the dangers of washing out of the stomach, and gives six instances of tetany in dilatation of the stomach and one case of fatal syncope and death in carcinoma of the stomach, accompanied by gastrectasia, a perforation in a case of unrecognized ulceration of the stomach, and hemorrhage from unrecognized carcinoma, all following the introduction of the stomach-tube; also warns against considering all tissues healthy until proved otherwise, and gives an instance of fatal rupture of the œsophagus, with two false passages from attempts to pass a stiff tube for forced feeding in a case of melancholia.

With the soft tube, however, it is hardly possible to rupture the œsophagus or form false passages.

The solution used consists of boiled water cooled to about 100° Fah., in which a drachm of salt to the pint is dissolved.

This makes a solution of an approximate density to the fluids of the body, and consequently is not absorbed in any large quantity, neither does it excite an abnormal flow of serum to the stomach.

The quantity used depends upon the amount the patient can take with comfort; as soon as there is a sense of distension the funnel is quickly lowered and the stomach emptied upon the siphon plan.

This is repeated until the water comes away clear.

If it is desired to put in a feeding at this time, as in a case of nausea, it can be done, or if a local application of some medicine in solution is preferred, it can be put in for a few minutes and then removed or retained.

It would hardly be safe to use any medicine in poisonous quantities, since there is always a possibility of more being retained than desired.

Dr. Fenwich, in his article in the *London Practitioner*. also calls attention to three recorded cases of poisoning from the incomplete withdrawal of boric-acid solutions used in lavage of the stomach, two being fatal and the third recovering after a severe illness.

It is not my intention in this paper to refer to children's diseases further than to remind the profession that the stomachs of infants are subject to the same pathological processes that afflict their elders, with the exception that acute rather than chronic prevail, and that lavage of the stomach is a modern form of treatment for even very young children.

For this purpose a small soft rubber catheter is used, to which a glass funnel is attached.

This process of washing out of the stomach has also been the means of a wonderful advance in medicine.

It were not before possible for the practitioner to study each case of serious stomach disturbance with reference to the amount of HCl the fluids of the stomach contain after a certain time had elapsed since a test-feeding had been given, nor to know whether there was an excess or deficiency of pepsin or pepsinozen, or the curdling ferment and its zymozen, or whether lactic acid was present or not or various fatty acids, or whether the stomach possessed sufficient power or was weakened by dilatations as indicated by the excess of fluids, or whether there was a decomposition of ingested food at a time when digestion should have been

completed.

A few cases of interest have come under my care.

Case No. 1 was a young lady of 24 years of age, of New York city, with a family history of tuberculosis and insanity, and a personal history of nervous prostration accompanied by uterine and ovarian disease and dyspepsia, the latter from childhood.

She was a teacher of art by profession.

Her life had consisted of a series of epochs of long and protracted illnesses.

During her stay of some three months in the hospital, in addition to other indicated treatment, her stomach was washed out two and three times daily.

This afforded her great relief, and enabled her to take and digest her food—which consisted strictly of liquid diet, petonized and plain—with a degree of comfort.

She left the hospital very greatly improved, however taking the stomach-tube with her, and reported later that she was getting on very nicely.

Case No. 2 was that of a woman of 45 years of age, who was brought into the hospital with great irritation of stomach, so much so that she retched almost constantly.

She had some uterine disease for which she was treated, liquid diet was prescriped, and her stomach washed out.

In four or five days we succeeded in stopping the retching.

She remained some five or six weeks and improved, but not so rapidly as desired, and finally left on account of home duties, still complaining of some irritation of the stomach.

Case No. 3 was a young German servant-girl of 23 years of age, who was brought to the hospital because of a deterioration of health which prevented the proper performance of her duties.

Her symptoms were rather indefinite, she had a slight rise of temperature, also acceleration of pulse, and complained of rheumatism in the right shoulder.

Her feet were slightly œdematous and the heart weak with frequent palpitations.

There was some pain after taking meals, but not excessive.

She was in fair flesh.

For a week we tried medication and massage without result, and then stomach washing as an additional was prescribed.

But she utterly refused to take the prescription, and we worried through another week with no better result; then the alternative was given of submitting or leaving the hospital, and she submitted and began rapidly to improve.

In two weeks more she left ready to resume work.

Several other cases followed of less interest because of less serious disease. All, however, were benefited by the use of the tube.

In two cases of abdominal section I washed out the stomach for the relief of nausea following anæsthesia.

One patient was completely relieved, the other temporarily.

The latter was a morphine eater, a fact unknown until the operation was done, and eventually succumbed to shock and the sudden cessation of the habit.

My last case has been under my charge for the last nine months.

When first called I found the patient laboring under great excitement, with a pulse of 140, and a most excruciating pain of the stomach.

I administered sedative, and finally quieted her down; but was called back in haste within six hours and about every night thereafter for a week, although in the meantime I had been giving tonics and medicine to aid digestion, and ordered liquid food.

Finally I proposed the stomach tube, to which the patient eagerly assented.

She was willing to try anything for relief.

Her stomach was washed out once a day for a month, and then once or twice a week for a few weeks longer.

After the first washing out I ceased to be called out nights.

For two months I saw nothing of her. Then she had another attack of acute indigestion due to exposure to cold and some indiscretion in diet, and the process was renewed for a short time. Then she came to

the office twice a week.

I succeeded in getting bananas and the pulp of oranges and quite an amount of grease sometimes, and I am assured that the patient was not careful in her diet.

The last time I was called I advised the patient to get a stomach tube and use once or twice daily as needed. She had brought on another attack.

I have not heard from her since.

Her gastritis dates from childhood with a great aggravation of symptoms in the last four years.

She has a most obstinate constipation and a tendency to phthisis.

The stomach is enormously dilated and secretes a large amount of mucus whenever an acute attack supervenes.

I have neglected to say that during these attacks the patient is put upon peptonized milk.

The permanent benefit derived from the use of the stomach tube depends upon a great variety of factors; but that this mode of cleansing is a very important adjunct, in properly selected cases, to other modes of treatment, is beyond controversy.

Treatment of Tubercular Peritonitis by Insufflations of Air.

Therapeutic Gazette.

It has been demonstrated in some instances that air exercises a special action on tubercular peritonitis. It has been found sufficient to open the abdomen, exposing this to the air for a few moments, the procedure being followed often by a cure. Bearing these facts in mind, Duran (*Revista de Ciencias Medicas de Barcelona*) has employed the following method in two cases of tubercular peritonitis accompanied with ascites. After evacuating the liquid by means of a common trocar,—in one case he removed eight litres (fourteen pints), and in the second case, twelve litres (21.1 pints),—he insufflated as much air as possible into the peritoneal cavity through the same trocar. The air had previously been made to pass through caustic potash moistened with phenic acid. The air was allowed to remain in the cavity for a few moments and then let out, after which a light compress was applied. The patients were somewhat feverish and had slight nausea during two days. Tympanitis persisted for about eight days and then it began to subside. Gradually the abdomen regained its normal size, and in about six weeks a complete cure was effected. These two cases are certainly interesting, and the method employed seems to be worthy of further trial. Its application is, indeed, simple and devoid of danger as long as sufficient antiseptic precautions are taken.

New Appointments at the Medico-Chirurgical Hospital.

The board of trustees of the Medico-Chirurgical College met last evening and elected the following gentlemen to various chairs in that institution:

Dr. Isaac Ott, of Easton, Pa., professor of physiology; Dr. William E. Hughes, professor of clinical medicine; Dr, Albert E. Roussel, assistant professor of clinical and of practice of medicine; Dr. Charles W. Burr, clinical professor of nervous diseases; Dr. William C. Hollepeter, clinical professor of diseases of children and pediatrics; Dr. Arthur H. Cleveland, clinical professor of laryngology; Dr. Edward B. Gleason, clinical professor of otology, and Dr. William Blair Stewart, lecturer in therapeutics.

Prof. Fdwin J. Houston and Dr. Henry Fisher were elected members of the board of trustees.

ONE hundred years ago the treatment for hydrocele was to draw off the contents by means of a trocar, and fill the sac with wine and water, 2 parts to 1. This was afterwards removed. Some swelling and pain resulted but soon disappeared.

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Topeka, Kansas, Saturday, June 30, 1894.

Massage.

Many of the procedures which have been handed down to us from olden times are less deserving the attention of scientific men than is massage. The ancient Greeks and Romans, though crude in the methods used, were evidently very appreciative of the benefits derived from rubbing and anointing with olive oil.

Massage as a curative or hygienic agent has received little attention from the medical profession generally.

In 1875 Prof. Billroth wrote: "I can only agree with my colleagues, Langenbeck and Esmarch, that massage in suitable cases deserves more attention than has fallen to its lot in the course of the past ten years in Germany." Massage was considered old then. Much literature has been written on the subject since that time, yet we find the majority of practitioners are not only unaccustomed to its use, but totally ignorant of the results that may be obtained by these procedures. Most of us, though having a general idea of the meaning of the term, know practically nothing of the scope of its application. From the simple movements which first characterized massage, a great complexity of manipulations has arisen, until nearly every structure and tissue in the body may be reached. In therapeutic application massage has grown from insignificance to vast importance as a valuable adjunct in the treatment of a variety of diseases.

Gilles, in some recent writings, claims that massage forces the materials injected into the tissues or into the articulations in a centripetal direction, and that it increases the absorption of injected liquids. Other investigators confirm these opinions. He claims that by an indirect action upon the vaso-motor system nervous diseases are arrested. In diseases of the spinal cord it does much good by the action exercised on the peripheral terminations of the nerves ending in the diseased centers. In diseases of the articulations, in muscular contractions, muscular atrophy and muscular paralysis, the benefits resulting from the proper application of massage have been frequently demonstrated.

Massage acts on the nutrition of the tissues, especially of the skin and muscles. Dr. John Mitchell, of Philadelphia, in the *American Journal of Medical Science*, May, 1894, published the report of some investigations on the effect of massage in increasing the number of red blood corpuscles. In a healthy individual it was found that after an hour's treatment the count of red blood corpuscles had increased from 5,675,000 to 7,950,000, and at another time from 5,650,000 8,125,000. In cases of neurasthenia, anæmia, rheumatism sciatica, the count was increased in some cases 1,200,000, varying greatly under various circumstances. From these investigations the doctor concludes:

"In health massage increases the number

of red blood corpuscles, and to a less degree and not so constantly their hæmoglobin value.

"In all forms and grades of anæmia there is a very constant and large increase in the number of red corpuscles after massage. This is greatest at an interval of about an hour, after which it slowly decreases. This decrease is postponed more and more if the manipulation be daily repeated. An improvement also takes place in the general tone of the circulatory and muscular systems.

"There is an occasional but inconstant increase in the hæmoglobin value, and this increase is proportionately less great than that of the cellular elements.

"It has been doubted if so powerful and fatiguing a method of treatment as massage is safe and desirable in very high grade anæmias. It is now for the first time made clear that it is of great and certain service and without danger in such cases, no matter how feeble."

Dr. Mitchell is good authority on the subject of massage. His experience covers a period of several years. These suggestions should meet with careful consideration by the profession.

Good judgment and intelligence are essential to the proper administration of massage. The condition of the patient must always be a guide to the masseuer.

Disappointment to both physician and patient result from the application of too much force and from too prolonged treatments.

Through the kindness of Dr. Whitmer we had the pleasure of witnessing the treatment of a case of pelvic adhesions. The work in this case is done mostly with the fingers, making deep pressure over the adhesions. The movements, which are kept up for from twenty to thirty minutes, seem to give the patient no disturbance or pain. The result of the treatment so far has been very successful, the adhesions having almost entirely disappeared.

If such results can be obtained in pelvic adhesions, it seems very probable that in those cases of pleuritic adhesions where the lung is contracted and the breathing capacity very much lessened the application of Swedish movements would be a valuable adjunct to other treatment. The ordinary treatment of such cases is very unsatisfactory. In one case, in which we had our patient practice a few simple arm movements, with deep inspiration, there was considerable increase of expansion. A careful study of these movements, with their application when indicated, might result in many successes where failure has been the rule.

Vaseline in Nasal Disease.

Dr. Thomas F. Rumbold, of San Francisco, a pioneer in rhinology, has published recently an article in defense of vaseline as an application to inflamed nasal membranes. Dr. Rumbold says that though he has tried hundreds of preparations claimed to be superior to vaseline, as yet not one has nearly equalled it. He claims that the vaseline spray increases the inspiratory function of the lungs. In regard to this he says:

"I am sure that I have had dozens of patients who had chronic inflammation so long that they had lost all function of smell, were not even able to distinguish the odor of burnt coffee, and others whose nasal passages were so hot and dry that it occasioned a sore throat; all these abnormal symptoms disappeared under the spray of vaseline. A positive proof of the beneficial effect of the spray of vaseline in the nasal passages is the increase of the inspiratory function of the lungs."

Its continuous use does not produce bad results, but in many cases of atrophic rhinities marked improvement is obtained. Our own experience with the hot vaseline spray has been so satisfactory we feel justified in emphasizing his remarks. Much of the disappointment in the application of vaseline results from careless application and negligence in properly cleansing the membrane. We have found, however, that in atrophic rhinitis, when the scales are firmly adherent to the membrane, they are more easily

removed after an application of warmed vaseline spray. After they are once thoroughly removed and the membrane thoroughly coated with vaseline they do not readily reform, and the nose may be kept clean and in a comfortable condition by repeating the application every day. In follicular pharyngitis, where there is excessive irritation, heat and pain, an application of warm vaseline with a few drops of oil of eucalyptus gives almost immediate relief. The spray is easily made with a De Vilbiss tube, warming the bowl over a lamp or gas jet until the vaseline is fluid. Where there is an excessive mucous secretion an alkaline cleansing solution should be used until the membrane is thoroughly clean. Listerine one part to seven of water is the most satisfactory solution for this purpose we have ever used.

Where the condensed air chamber is employed for making the spray caution should be used in the amount of pressure. The lowest pressure requisite for making a spray is sufficient, and under no circumstances should a pressure of over twelve pounds be employed in spraying the nose.

Guaiacol in Reducing Temperature.

Just how guaiacol acts in reducing high temperature seems to have been a matter of some uncertainty.

Guinard, from several experiments upon animals, concluded that the result was too prompt to be the result of absorption, and that it was due to cutaneous stimulation, which affects the nerve-regulating mechanism of heat production, through the thermic center. He claims that when the sciatic nerve in a dog is divided, the application of guaiacol to the leg does not affect the temperature, and further, that when the vapor is excluded from the air inhaled guaiacol does not appear in the urine after being applied to the skin.

Dr. W. Gilman Thompson has recently made some experiments on animals, and finds that in some of the lower animals the application of guaiacol produces death in a few hours. He reasons from this that the drug acts by immediate absorption by the blood in the cutaneous vessels. Death would hardly be caused by reflex action through sensory nerve terminals produced by an agent which causes no apparent irritation to either man or animals. By ligating all other structures of the leg, leaving the sciatic nerve free, he found there was no reduction of temperature from the application. But immediately the drug was applied to the other leg there was a fall of temperature. From his experiments he concludes that the effect is due directly to the absorption. The fact that when the animals were placed in an atmosphere slightly warmer than their own normal body temperature, their temperature again became normal, seems to indicate that the reduction was occasioned rather by increased heat loss than diminished heat production.

Northwest Kansas Medical Association.

The Northwest Kansas Medical Association will meet in Ellis, Kas., Tuesday, August 7, 1894, at 10 o'clock A. M.

PROGRAM.

Hip Joint Disease, Dr. L. J. Lyman. Discussion, Dr. J. C. McClintock, Dr. E. B. La Fevre.

Dysentery, Dr. C. W. Winslow. Discussion, Dr. W. E. McVey, Dr. J. W. Tulles.

Constipation as a Result of Disease of Rectum, Dr. G. B. Snyder. Discussion, Dr. S. E. Sheldon, Dr. W. R. Griffin.

Enteric Fevers, Dr. J. N. Page. Discussion, Dr. C. Hammond, Dr. F. Dougherty.

Aseptic Obstetrics, Dr. W. J. McDonald. Discussion, Dr. J. W. Norris, Dr. J. N. T. Taylor.

Three Therapeutic Agents — Mercury, Opium, and Quinine, Dr. F. O. Brainard. Discussion, Dr. J. E. Vanderpool, Dr. C. W. Bobo.

Hemorrhoids, Dr. B. Jones. Discussion, Dr. W. E. Fowler, Dr. J. H. Middlekauff, Dr. M. Tulles.

Taxis in Strangulated Hernia.

Dr. John Ashurst, jr., in an article on the treatment of strangulated hernia, published in the *Maryland Medical Journal*, June 23, says in regard to the use of taxis:

"*The limitations of taxis.* I feel obliged to say that while I have reduced a good many strangulated hernias by taxis, while I think that it should be the surgeon's first thought, and while if practiced with care and skill it is a safe method, and one which will usually succeed when resorted to in time, yet I must express my belief that in the hands of an inexperienced practitioner, who sees but few cases of hernia, taxis is an unsafe procedure. Under such circumstances, I think that the patient would sometimes be safer with the operation of herniotomy than with taxis, for herniotomy is not a very difficult operation and not very dangerous if performed with caution, whereas taxis, while seeming to be very simple, yet if employed with great persistence and force may lead to the most serious consequences. My own cases of herniotomy which resulted fatally had been mostly subjected to prolonged taxis. Taxis, therefore, I think, has its limitations, and should be resorted to with great gentleness and with great caution, except in the hands of those surgeons who are sufficiently familiar with the anatomy and treatment of strangulated hernia to feel that they may use the method more freely and more systematically. It is, of course, known to the Fellows of the Academy that its founder, the late Prof. S. D. Cross, maintained that very few cases of hernia required operation. He prided himself that he was able to effect reduction by taxis where others had failed; and such was undoubtedly the case. In the hands of a man like Prof. Gross, taxis was a safe procedure, but in the hands of the ordinary practitioner I believe that the line of safety for the patient will often be found in herniotomy rather than in a prolongation of taxis.

"It is scarcely necessary to say that when taxis is employed it should be done with gentleness and with system. The ordinary method of pushing at the hernia is very uncertain, and is not only apt to do harm, but is almost sure not to do good. The rule that the last portion of bowel which has come down should be first returned is very valuable and should always be borne in mind. Then I find what I am in the habit of speaking of to students as a kind of conjoined manipulation, a very useful mode of applying taxis, and I think the safest. The neck of the sac is grasped by the thumb and fingers of one hand, while the other hand, spread out, exercises a combination of pushing and squeezing; and then by a kind of alternating movement, slightly relaxing one hand while with the other the pressure is increased, if the hernia is reducible at all, it will go up. If no gurgling is heard in a few minutes it is not likely that taxis will succeed.

"As regards the aids to taxis, the older surgeons resorted to many modes of assisting taxis, but in modern times surgeons have pretty much come down to two or three. Even the warm bath, which was much resorted to formerly, I think is seldom employed at present. At the Pennsylvania Hospital our practice is to put the patient in bed, apply ice over the hernia, and give a moderate quantity of opium. When the resident physician is not able to reduce the hernia by gentle taxis, this course is followed until the surgeon has been summoned. It often happens that when the surgeon arrives he finds that the hernia has been reduced spontaneously or disappears under the slightest touch.

"If this fails, our rule is to administer ether and again employ taxis, and in this way the hernia can usually be reduced. Before administering ether we have an understanding with the patient that if taxis does not succeed then the operation is to be resorted to.

"Another manipulation which is of great importance is to draw down the hernia a little before beginning the upward pushing movement, the object being to disengage the portion of bowel which is nipped by the source of constriction. The plan known as

Seutin's I have never seen of avail, and I can hardly conceive of a case where it would be required in which it could be used successfully. This plan consists in endeavoring to introduce the finger or thumb-nail into the constricting ring, which is then stretched; this could be practiced only in very thin persons, and where it could be done I think it probable that taxis would succeed without it."

Tonsilitis.

Dublin Jour. Med. Science.

Von Ziemssen's treatment in cases of catarrhal tonsilitis consist in injections of seven minims of a two per cent. solution of carbolic acid into the middle of each tonsil. He used for this purpose a specially constructed syringe. Soon after the injection, pain and difficulty in swallowing diminish, and the temperature becomes normal. Usually only one injection into each tonsil is necessary. Sometimes a second is required in order to check inflammation. It might be said that the fall in temperature was due to the natural termination of the attack. From the constancy, however, with which this fall followed the injections, and the immediate improvement of symptoms, Von Ziemssen believes the injections check the activity of the active microbes which are causing the inflammation. The injections are easy to carry out, and do not irritate the throat.

Sahli (Berne), in the discussion which followed, stated his agreement with Von Ziemssen as to the beneficial effect of this treatment both in tonsilitis and scarlatinal sore throat. He said that latterly, instead of carbolic acid, he had been using iodine trichloride, a strong antiseptic, yet not a very poisonous body. He uses a two per cent. solution of this body in water, and injects one or two minims of this into the tissues in different places once or twice daily. He uses this method in diphtheia with surprisingly good results. He strongly recommends this treatment for general adoption, and adds that he uses an ordinary hypodermic syringe, and that the procedure is extremely simple and easy to carry out.

What Constitutes an Homeopath?

It is interesting to note the diversity of opinion that exist as to what constitutes an homeopath, as between the practitioners of that sect and those who are practiced upon. Dr. Stens of Bonn (*Homeopathic Recorder*, March 15, 1894) observes that homeopathic remedies are called so because they are dispensed to the sick in accordance with the law of similars and not on account of the largeness or the smallness of dose, as the whole scale, from the crude drug or mother tincture through all the potencies up to the highest must be available for curative purposes. Whenever a drug is administered on the law of similars it becomes homeopathic, and whenever a drug is given on the law of contraries then it becomes allopathic. The general tendency of the laity is totally at variance with the above ideas, and the sublime truths of allopathy and of homeopathy are things most terribly mixed in the laical mind. Its idea of homeopathy is altogether guided by the size of the dose: with the laity an ounce or two of castor oil or of Epsom salts given homeopathically on the law of similars by a regular and with the best of intentions to circumvent a diarrhea, becomes a nauseous and dangerous allopathic dosage, whilst an allopathic dose of a quarter of a grain granule of opium given by a professed homeopath to cure the same disorder is looked upon as homeopathic. The difficulty of knowing one from the other at all times is so great, even for physicians, that it is not surprising that the laity should be at sea. We cannot over look the fact, however, that some homeopathic practitioners do not wish the laity to possess the opinion of homeopathy as expressed by Dr. Stens; these practitioners would rather have them believe that the size of the dose is the matter of chief importance.

Erysipelas.

North Carolina Medical Journal.

For erysipelas, especially of the extremities, the following is recommended: Rubber tissue of sufficient size to extend about a hand's-breadth beyond the affected area is dipped in a 5 p. c. solution of carbolic acid and spread smoothly over the erysipelatous patch. A layer of cotton wadding is placed over this, and the whole secured firmly in place by a few turns of a roller bandage. After twenty-four hours this cotton wadding is removed and renewed, a larger piece of rubber tissue being placed over that already in position, if necessary, to cover in any increased area of the disease. The method seems to be strikingly successful in erysipelas of the extremities; less so upon the face and trunk. After several applications all the rubber tissue is removed, large pieces of the epidermis separating at the same time. In the case of the lower extremities, an erysipelas commencing at the foot and extending to the leg, the affection has been completely arrested by a single application.

Spasmotin; a Derivative of Ergot.

Dr. Jacobi, Ther. Monatsh., 1894; VIII; p. 219.

Spasmotin (spacelotoxin) is a poisonous element of ergot, reported to have been isolated by Dr. Jacobi. It has been so named owing to its causing spasms of the small arteries; and, like ergot itself, it is said to have a stimulating effect on the pregnant uterus. The method of producing spasmotin is based on its solubility in ether, and its insolubility in petroleum ether. The spasmotin is extracted from ergot direct by ether and precipitated by addition of petroleum ether; or the oil contained in ergot is first removed by extraction, and the spasmotin extracted by ether from the ergot. In the pure state, it is described as a yellow, amorphous powder, insoluble in water, in dilute acids, and petroleum ether, but very easily soluble in ether, and in alcohol, acetic ether, and benzene. Spasmotin forms salts with alkalies, and may again be precipitated by carbonic acid. From benzene it may be obtained in crystals. The formula $C_{20}H_{21}O_9$ has been assigned to it.

The pharmacological effects of ergot are said to be inherent in spasmotin and in its sodium salt. The latter is suitable also for subcutaneous application, as it does not produce local disturbance of any kind. Accoring to Dr. Freund, spasmotin yields the same effects as are obtained with ergot. The doses employed in satisfactory experiments so far have ranged from 4-8 centigrammes (⅔-1⅓ grn.); doses up to 1 gramme (15 grn.) have been given without inconvenience. Definite therapeutic data are yet wanting, however.

Metabolism in Fever.

American Medico-Surgical Bulletin.

Experiments were carried out on starving rabbits in which fever had been excited by the injection of swine-erysipelas bouillon cultures. All the animals showed an elevation of nitrogen excretion. The quantity of carbon excreted with the urine is increased in fever. Substances are found in the urine which under normal conditions are excreted in but small quantity, *e. g.*, kreatinine, which is considerably augmented in febrile subjects. The total carbon excretion is likewise considerably increased. This increase is apparently referable to carbon derived from albuminous bodies.

The heat production is increased in febrile animals. This increase is dependent upon the increased disintegration of albumin, while the decomposition of non-nitrogenous substances shows no noteworthy increase or decrease. The question why relatively more albumin than fat is consumed in fever could not be satisfactorily explained by the experiments. On the other hand, it appears that the ability of the cells to disintegrate carbohydrates is enhanced in fever. This was proven by experiments through which

it was determined that in febrile animals glycogen *disappears* more rapidly than in the normal. On the contrary, a significant diminution of disintegration of albumin was noted upon exhibition of grape-sugar. It appears, therefore, as if the fat, because of its slow combustion, is not adapted to compensate for the inequality of temperature in fever. For this is required an easily combustible material, the carbohydrates, or in inanition stadia the albuminous bodies.

The Remedy Par Excellence.

In the April, 1894, number of the *Universal Medical Journal*, the companion publication to the *Annual of the Universal Medical Sciences*, a magazine covering the progress of every branch of medicine in all parts of the world, and both edited by Chas. E. Sajous, M.D., Paris, France, we find the following notice of antikamnia extracted from an article by Julian, which originally appeared in the *North Carolina Medical Journal:*

"The importance attached to this drug, I think, is due to its anodyne and analgesic power, and the celerity with which it acts. As an antipyretic in fevers, it acts more slowly than antipyrin, but it is not attended with depression of the cardiac system and cyanosis. Whenever a sedative and an analgesic together is indicated, this remedy meets the demand. In severe headaches it is the remedy *par excellence.*

KAW PHARMACAL CO., Topeka, Kas.—Gentlemen: I am so well pleased with your preparation of Guaiacoline that I can recommend it as a preparation reliable in its effects and a tonic par excellence that can be given to and assimilated by the most delicate or disordered stomach. It has given me sure results in phthisis and other wasting diseases. C. S. MCCLINTOCK, M.D.

WE call the attention of all those in arrears for subscriptions to the JOURNAL to the notice we sent out the first of the year to the effect that subscribers who were in arrears for subscription must pay the regular price, $2.

GRATIFYING results have been obtained by Bernhart in inoperable uterine carcinoma, by the parenchymatous injection of salicylic acid in solution, 6 per cent. in 60 per cent. alcohol.

CAMPHORIC acid is a result of the action of nitric acid on camphor, and is claimed to be a valuable remedy in the sweating of phthisis. It should be given in large doses.

DR. TILLOTSON, of Chicago, uses gunpowder and honey in the proportion of six drams to four ounces in diphtheria. This he claims to be entirely successful.

RICHARDSON claims that abdominal pain associated with constitutional disturbances, rising temperature and pulse, is usually due to disease of the appendix.

DR. BREWER, of Chicago, thinks that vaccination will in many cases cure phthisis.

WE are informed that the smallpox epidemic at Atchison has broken out again.

DR. WAUGH claims that vaccination is antagonistic to whooping cough.

LAVAGE of the stomach is reported to instantly relieve hiccough.

Dr. Una's Plaster-Mulls.

Horatio R. Bigelow, M.D., in the Medical News, September 23, 1893.

Those physicians who are interested in dermatology, and are consequently familiar with the reputation and works of the eminent specialist, Dr. P. G. Unna, director of the Heilanstalt fur Hantkranke in Hamburg, will know that with Dr. Unna a favorite form of administering medicines is the plaster-mulls. These plaster-mulls were originated by Dr. Unna, and have been used and favorably indorsed by many physicians, including such authorities as McCall Anderson, Janowsky, Robert M. Morrison, J. C. McGuire, Edward Borck, Chotzen, Bulkley, and others.

Plaster-mulls are an ideal improvement on the ordinary spread plasters; fine gauze is covered with the thinnest possible layer of gutta percha, on which the medicament is evenly spread, properly dissolved in a minimum quantity of vehicle or base. The gutta percha covers the skin surface hermetically, prevents transpiration from the pores, and thus facilitates the deeper absorption of the medicament and enhances the specific therapeutic effect of the indicated remedy. The vehicle or base employed is non-irritant and a solvent of the remedy. Of the latter, an exact amount of dosage is added, and being perfectly dissolved, every particle of the ointment surface will act equally; in other words, the plaster-mulls offer a sort of specific medication. A chief advantage besides this exact dosage is that the plaster-mulls are so thin, elastic and pliable that they can be closely affixed to any portion of the body without cutting or patching. No artificial heat or other manipulation is necessary for applying these plaster-mulls; simply placing them on the surface requiring treatment, and holding them there for a moment snffices to firmly attach the plaster to the skin by virtue of the body heat.

While these plaster-mulls have come into extensive use in Europe, they have not been generally adopted in this country, principally for the reason that they have not been manufactured here, and the importation from Hamburg was connected with difficulties, loss of time, etc. Recently, however, I have been enabled to procure a limited line of the most important medications of plaster mulls, and I take early occasion to report my favorable opinion.

The medications which I have used are as follows: Salicylic acid, each roll 1 meter long by 20 c.m. wide (about one yard long and 8 inches wide) containing 10 grams, which amounts to about one-thirtieth of a grain of salicylic acid to the square inch of plaster-mull:

Mercury, 20 gm. (1-15 gr.)

Mercury, 20 gm. (1-15 gr.), with carbolic acid 7.5 gm. (1-40 gr.)

Zinc oxid, 10 gm. (1-30 gr.)

Zinc oxid, 10 gm. (1-30 gr.), with tar 5 gm. (1-60 gr.)

Thiol, 10 gm. (1-30 gr.)

Resorcin, 15 gm. (1-20 gr.)

Salicylic acid, 10 gm. (1-80 gr.), with creosote 20 gm. (1-15 gr.)

Salicylic acid, 20 gm. (1-15 gr.), with creosote 40 gm. (2-15 gr.)

I have given up ointments almost entirely; they lack the neatness, elegance and efficacy of a well-fitting plaster-mull.

The general physician will find plaster-mulls of great utility.

In my own practice I am now employihg these plaster-mulls wherever indicated, and it is my intention in a subsequent communication to furnish some clinical records confirming the good opinion already formed.

VOMITING during anæsthasia may be arrested by compression of the phrenic nerve and vagus. Pressure should be made with the thumb immediately above the sternal end of the clavicle on the left side.

PICROTOXINE, 1-40 gr. at bedtime, is claimed to be an efficient remedy for night-sweats of phthisis.